

*Occultation of the Pleiades by the Moon, on Nov. 12, 1856,
as observed at Madras. By Capt. Jacob.*

			Madras Sidereal Time.		
			^h	^m	^s
"	Tauri	disappearance	7	17	48.2
23	—	reappearance	26	50.2	
1176	B. A. C.	disappearance	34	24.2	
27	Tauri	disappearance	48	24.2	(a)
"	—	reappearance	48	44.2	(b)
28	—	disappearance	58	42.2	
1188	B. A. C.	disappearance	8	4	28.2
1186	—	disappearance	6	46.2	(c)

Interrupted by clouds and rain. Moon very near the full. Power employed, 114.

- (a) The star seemed to slide on to the moon, but was not distinctly visible on its face. Sky hazy, with flying clouds.
 (b) Doubtful to about 1^s, being hurried from the previous observation.
 (c) Uncertain to 2^s or 3^s, the stars being dim through the haze.

Occultations of Stars by the Moon, observed at Highbury.

By T. W. Burr, Esq.

The following occultations in the year 1856 have not been previously reported :—

			Mag.	Local Sid. Time.		
				^h	^m	^s
Jan. 12	27 Piscium	5	Immersion	1	16	39.9
			Emersion	1	33	4.4
March 13	136 Tauri	4½	Immersion	8	19	23.9
			Emersion	9	31	7
July 25	τ ² Arietis	6	Immersion	20	48	23.9
			Emersion	20	59	57.9
	65 Arietis	6	Immersion	21	10	56.9

The immersions of τ² and 65 *Arietis* are rather uncertain. The first ran along the edge of the lunar crescent for some seconds, rendering the moment of disappearance doubtful, and the latter was affected by the boiling and bad definition of the moon's limb. The other observations are good.

Notice of his Solar-spot Observations. By R. C. Carrington, Esq.

It is pretty generally known that during the past two years the surface of the sun has exhibited a comparative state of quiescence, the outbreaks of spots being few and often far between, and the spots themselves for the most part small. The Redhill observations, however, indicate that the epoch of least action is now passed, and as they appear to fix the date of the minimum with

some degree of certainty, it is thought that the following numbers may not be without interest. In the first column is given the number of days on which spots were seen on the disk in each month; in the second, that on which no spots were found; and in the third, the percentage of spot-days to days of observation, as a measure of frequency. The fourth column contains the means of successive numbers in the third, and the fifth the means of those in the fourth.

		Spots.	No Spots.	$\frac{(1)}{(1) + (2)}$					
1855, Jan.	...	8 days	5 days	.62	...	74			
Feb.	...	11	2	.85	...	81	...	77	
Mar.	...	13	4	.77	...	55	...	68	
Apr.	...	7	15	.32	...	35	...	45	
May	...	5	8	.38	...	32	...	34	
June	...	6	17	.26	...	15	...	24	
July	...	1	23	.04	...	14	...	14	
Aug.	...	7	23	.23	...	15	...	14	
Sept.	...	1	16	.06	...	33	...	24	
Oct.	...	11	7	.61	...	41	...	37	
Nov.	...	3	11	.21	...	18	...	29	
Dec.	...	3	19	.14	...	7	...	12	
1856, Jan.	...	0	13	.00	...	11	...	9	
Feb.	...	2	7	.22	...	11	...	11	
Mar.	...	0	16	.00	...	20	...	15	
Apr.	...	7	11	.39	...	22	...	21	
May	...	1	20	.05	...	20	...	21	
June	...	7	13	.35	...	40	...	30	
July	...	10	12	.45	...	44	...	42	
Aug.	...	10	14	.42	...	47	...	45	
Sept.	...	12	11	.52	...	43	...	45	
Oct.	...	3	6	.33	...	46	...	44	
Nov.	...	13	9	.59	...	52	...	49	
Dec.	...	7	9	.44					

An inspection of the numbers in the fifth column will show that the date of the minimum of energy, as exhibited by the spots, may now be assigned with tolerable certainty to the beginning of the month of February 1856, the ratios increasing slowly and perceptibly from that time. The substitution of the numbers in the fifth column for those in the third is simply equivalent to the graphical process of drawing a curve among, but not through, the summits of the ordinates representing the original numbers, a process which may be repeated if the curve still contains too violent inflexions, or may be modified by the introduction

of weights. The constitutional peculiarities still remain, but in a milder form.

The system of observation and reduction described in a previous number of the *Monthly Notices* has been continued as before; but it is not intended here to offer any remarks on the results, as through the more pressing nature of other work, Mr. Carrington has not yet been able to give any adequate time to the discussion of the positions observed. The year 1856 has been characterised by the rather frequent occurrence of low south spots, the latitudes 27° south and 35° south having each been more than once visited. As a general remark, it may be stated that when an outbreak occurs on a parallel not previously affected for several months, it is mostly found that two or three other outbreaks succeed at moderate intervals of time, not, however, at the corresponding longitudes, when the rotation of the surface is allowed for; and herein, it is believed by Mr. Carrington, that there lies a something for investigation. This and some other points noticed will, however, be inquired into with better opportunities when more raw material has been accumulated, and when we have arrived at a period of more activity than the present.

Extract of a Letter from Professor Hansen, on an Ancient Eclipse.

(Communicated by the Astronomer Royal.)

“I have calculated an ancient eclipse, namely, that of Ennius, of which Cicero gives an account in his work, *De Republicâ*, discovered within the last few years; whence it may be reckoned as one of the most certain and well-established eclipses of antiquity. Ennius says, according to Cicero, ‘Nonis Junii soli luna obstitit et nox.’ Now, in Cicero’s time, the Nones of June fell on the 5th; but, in the time of Ennius, on account of the lunar years and the intercalary month of the Romans, they fell between June 5 and July 4. On this account the following data, which have been investigated for this eclipse, may be considered acceptable:—

399, June 21.					
Greenwich Mean Time.	Moon's Longitude.	Moon's Latitude.	Equatoreal Hor. Par ^x .	R. A.	Decl.
h m	° ' "	° ' "	' " "	° ' "	° ' "
3 36	82 39 47.4	+ 0 31 41.1	60 24.65	81 57 37.3	+ 24 4 13.3
4 48	83 24 0.0	35 45.1		82 45 45.2	10 39.0
6 0	84 8 10.7	39 48.5	22.10	83 33 55.5	16 49.4
7 12	84 52 19.6	43 51.4		84 22 8.5	22 44.3
8 24	85 36 26.6	+ 0 47 53.7	60 19.35	85 10 23.8	+ 24 28 23.4